

## **Global Tender Enquiry for Modular Q-Switched Nd: YAG laser.**

**Approval no: IISc-GTE-2023/320**

**Publishing Date:19-12-2023**

**Reference No:PPH/AGH/2023-24/577**

A request for quotation from interested manufacturers for a Modular Q-switched Nd:YAG laser. The quotation should clearly indicate the terms of delivery, delivery schedule, transportation charges (if any).

All interested vendors will be required to submit a technical proposal and a commercial proposal in **twoseparate sealed envelopes**. Only vendors who meet the technical requirement will be considered for the commercial negotiation. The last date for submission of proposals is 09-Jan-2024, 5:00pm.

Proposals should arrive at the office of

**The Chairman,**

**Kind attention; Prof Arindam Ghosh,**

**F1-04,**

**Department of Physics, Indian Institute of Science,**

**Bangalore-560012 (INDIA)** with a clear mention of the reference no. on the envelope.

Enclose a compliance certificate along with the bid. This certificate should have a table that should describe your compliance in a “Yes” or “No” response against each of the items in the specifications listed below. If “No” is selected, the second column should state the extent of deviation. The third column should state the reasons for the deviation (if any). Please enclose a compliance statement along with the technical bid. Bids with no statement of compliance will be considered invalid.

### **General terms and conditions:**

- Vendor must have prior experience in manufacturing similar system and must submit list of at least 3 customers with contact information, and details of the supplied system.
- Payment terms should be mentioned in the technical bid.
- The commercial bid and technical bids must be submitted in two separate envelopes. A technical bid must contain a point-by-point technical

compliance document. The technical bid must not contain any price information.

- In the commercial bid, the price should be inclusive of all discounts.
- A pre-tender meeting for any technical clarifications can be scheduled by sending an email to “phanindrasai@iisc.ac.in”.
- The purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time before the award of contract without thereby incurring any liability of the affected bidder or bidders.

**The technical details of the system are given below.**

**Technical Requirements:**

**A. Technical Specifications of the Modular Q-switched Nd:YAG laser**

1. Laser Wavelength: 1064 nm & 532 nm
2. Pulse energy:  $\geq 300$  mJ@1064 nm & 150 mJ @ 532 nm
3. Pulse width (ns): 4-6 ns @ 1064 nm
4. Beam diameter:  $\leq 5$  mm
5. Divergence:  $\leq 0.7$  mrad
6. Repetition rate (Hz): variable repetition rate with max. 10 Hz
7. Energy stability:  $\pm 2\%$  or better @1064 nm
8. Beam pointing stability:  $< 100$   $\mu$ rads
9. Temporal jitter:  $\leq 0.5$  ns
10. Lamp lifetime: at least 50 million shots
11. M2 Value:  $< 2$
12. Flash lamps should be easily replaceable without further alignment
13. Triggering: (a) Both internal and external triggering should be possible  
(b) Q-switch and flash lamp trigger options (in and out) should be included in the system  
(c) In built delay generator: There should be a built-in delay generator to control the Q Switch sync out pulse by  $\pm 500$ ns with respect to the internal Q Switch firing.
14. Interfacing: RS-232.
15. A remote controller should be supplied with the Laser System for controlling the necessary parameters
16. Power supply: 220VAC@50Hz, single phase power supply to control the laser is preferred

17. Cooling system: A self-contained heat exchanger with air cooling preferred

**Other terms and conditions:**

18. It is mandatory to have an authorized dealer/supplier in India, necessary proof for the same should be provided with the technical bid

19. The Laser manufacturer should be from a reputed firm having wide range of systems in their portfolio and having all the models listed in their website including the quoted system.

20. The Laser should have 'Super Gaussian Resonator' configuration to provide diffraction limited beams with good quality in far field

21. The Laser should have the option for future upgrades including Harmonic generators and Energy attenuators. The Harmonic generators should be easily changeable modules which can be carried out by the end-user without any support from the technical engineer and without any requirement for any alignment of Optics and crystals

22. The supplier or the Indian agent should have factory trained service engineers in their team to provide prompt and efficient after sales service. Names and certificate copies of these engineers should be provided along with the Technical bid. This will be a critical criterion in the selection of the offers.

23. A user list of existing users for similar systems should be provided along with the technical bid.

24. The system should have a warranty of 3 year from the date of installation. The supplier should also mention the cost of 'Annual Maintenance Contract' per year after the standard warranty of the Laser in the commercial bid.

25. Installation Kit and Technical Manuals

26. Export packing

**B. Spares and accessories**

The supplier should also provide two Laser safety goggles with the system.

**C. Training and demonstration**

Yes